WORKER COMPETENCE PLANNING AND CORPORATE PRODUCTIVITY

PERFORMANCE: A STUDY OF ORGANIZTIONS IN NIGERIA

ISAAC ZEB-OBIPI

Department of Management, Rivers State University of Science and Technology, Port Harcourt, Nigeria

ABSTRACT

Worker Competence Planning (WCP) is one of the functions in Worker Competence Management. It has been associated with how well workers perform to affect the productivity of their organizations. This paper examines the relationship between Worker competence Planning and Corporate Productivity Performance. The paper also recommends courses of action to be taken by management practitioners for a more efficient and effective Human Resource Management.

KEYWORDS: Competence Mapping, SKA Gap Analysis, Personal development Plan, Cost Minimization, Time minimization, Waste Minimization, Product Line, Output Level, and Product Quality

INTRODUCTION

Competence Planning is the worker competence management function of determining the types and extent of competences required for a superior performance. The nomenclature given to this process and the specific activities it entails differ amongst scholars and organizations. It has been referred to in the literature as Competence Profiling, Cataloguing, Identification, Analyzing and Modeling (Kikeoma, 2000; Munene et al, 2000: Berio & Harzallah, 2005; Marrelli et al, 2005; North and Reinhardt, 2003). The preference for the concept "Competence Planning" is dictated by this paper's managerial function approach. This is because planning is a universally accepted function of management and the researcher's intention is to examine competence planning from a managerial function perspective. The use of the concept immediately conjures up tasks or activities in Competence Planning which include: (i) Competence Mapping (Cm), (ii) Skill, Knowledge and Attitude Gap Analysis (Sga), and (iii) Personal Development Plan (Pdp). On the other hand, corporate productivity performance refers to the record of achievements made by an organization (a corporation) at, or over a given, time measurable through several indices. Such indices include how an organization utilizes its resources to minimize time, cost and waste, and the product it offers in terms of product lines, output levels and product quality (Wild, 1995; Kotler, 1999; Bateman and Snell, 1999; Barad; 1998; Moorehead and Griffin, 1995; Wright and Noe, 1996; Ultimate Business, 2002).

Organizations are constantly worried over how best and satisfactory they are using their resources and/or with their product lines, output levels and product quality; hence the concern with poor productivity performance if not fear over outright business failure. Explanations for such a concern need to look at the direction of the extent to which the competences of the workers have been planned to bring about the desired corporate performance given the important contributions workers make to organization (Geus, 2002; George and Jones, 1996). This paper examines the association between competence planning and corporate productivity performance. It seeks to ascertain the extent to which competence planning tasks such as competence mapping, skill-knowledge-attitude gap analysis, and personal development

plan in relations to workers affect the resource utilization and product offering of organizations. Given that resource utilization and product offering are dimensions of corporate productivity performance, the paper has attempted to answer the following research questions:

- To what extent does competence mapping affect corporate productivity performance?

- To what extent does skill-knowledge-attitude gap analysis affect corporate productivity performance?

- To what extent does personal development plan affect corporate productivity performance?

METHODS

Review of Literature

The key variables of this study are Worker Competence Planning (WCP) and Corporate Productivity Performance (CPP). These are reviewed to provide the theoretical framework of this paper. Competence planning involves the tasks of Competence Mapping, SKA Gap Analysis, and Personal Development Plan. For Corporate productivity Performance, two dimensions with six indicators have been used. These dimensions are Resource Utilization and Product Offering. There are, therefore, five components of the theoretical framework of this paper; and these are laid out in Figure 1. The competence mapping task of competence planning enables individuals to find ways of translating competences into effective and efficient work performance behavior. It does not only identify and catalogue competences of individuals in their work roles and across an organization; it also ensures the matching of competences. When competences are mapped, it becomes easier to better utilize them. Such utilization of mapped competences becomes evident in an organization being able to produce more with the same resources (output level) and increasingly satisfying customers (product quality). Thus, competence planning affects output levels and product quality through competence mapping. Perhaps Kreitner and Kinicki (2001) have this in mind in their claim that successful performance depends on the right combination of efforts, ability and skills, and we add, in relation to a job. For Robbins (1996), the identification of competences is important as it guides decisions regarding what activities are crucial to an organization's success (performance) and that an employee's performance is enhanced when there is a "high ability job fit
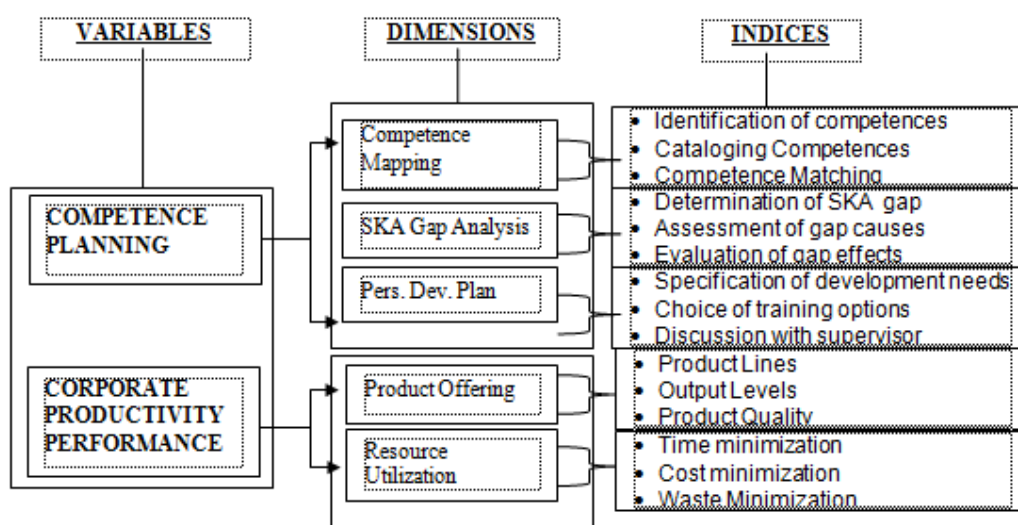
Source: Adapted from Zeb-Obipi (2015:21)

Figure 1: Index Formation for Competence Planning-Corporate Productivity Relationships

Another way by which competence planning influences productivity performance is through SKA gap analysis. SKA gap analysis involves the determination of skills, knowledge and abilities shortages, assessment of the causes of such shortages and the evaluation of their effects. There is no doubt that SKAs affect performance. Rue and Byars (1995:483-484) assert that ability is one of the determinants of performance. To Stoner et al (1995), skill is important for successful strategy implementation. In Lock's (1998) view the key resource of the modern business organization is knowledge and the key workers are knowledge workers. Describing abilities, aptitude and skills (and possibly knowledge) as being capable of interchangeable use, George and Jones (1996) have observed that ability:

Determines the level of performance a worker can achieve, and, because the effectiveness of an organization as a whole depends on the performance levels of all individual workers ability is an important determinant of organizational performance.

They acknowledge that knowledge provides information required to perform at a high level, and that all the information skills and expertise required for creative decisions constitute task-relevant knowledge. An appropriate level of such knowledge enables workers to perform their jobs more effectively and efficiently. The way by which such level is determined (not attained) is by SKA gap analysis. By this analysis, both workers and management are enabled to identify the nature, sources and effects of SKA gaps. It then becomes possible to address such gaps which might affect all aspects of an organization's performance (from time minimization to product quality). This is the reason why the SKA gap analysis task of the competence planning function is thought to be associated with all the measures of CPP.

A third way by which competence planning influences productivity performance is through personal development plan. This entails "self" specification of development needs, choice of training options and discussion of the needs and options with a supervisor. Ultimate Business (2002) describes it as a prerequisite for competence. The import of this lies in the emphasis on the individual's self-assessment and collaboration with supervisors and subject matter aspects. Because it entails a check on performance against agreed plan and includes an update of the plan "that will address gaps and/or identify areas to work on future roles" (Organization A, 2003), it affects what the planner can produce in terms of quantity and quality. This is because, just like SKA gap analysis, it is a prerequisite to efforts aimed at developing competences. From the London Management Center's (LMC) 2000/2001 Profile of a competency-based performance programme, we find personal development plan to be central. It involves:

Identifying strengths and areas for improvement based on clearly defined competencies, agreeing measurable objectives (and linking) competency to standards and needs of the business and the individual (LMC, 2000: 26).

Because of these attributes of the personal development plan, it seems to us that it affects all dimensions of the individual and organizational performance. Taking output level and product quality for example, by the personal development plans, the organization could realize that it has not made the best of its resources and areas for improvement exist. An appropriate response to such observations could result in having greater output at the same level of input and reduction in the production of defective products.

Research Hypotheses

In view of the forgoing, the following hypothetical statements that correlate Competence Planning with dimensions of CPP were formulated and tested:

H_{A1}:	Competence mapping is associated with output levels.
H_{A2}:	Competence mapping is associated with product quality.
H_{A3}:	SKA gap analysis is associated with product lines.
H_{A4}:	SKA gap analysis is associated with output levels.
H_{A5}:	SKA gap analysis is associated with product quality.
H_{A6}:	SKA gap analysis is associated with time minimization.
H_{A7}:	SKA gap analysis is associated with cost minimization.
H_{A8}:	SKA gap analysis is associated with waste minimization.
H_{A9}:	Personal development plan is associated with output levels.
H_{A10}:	Personal development plan is associated with product quality.

Collection of Data

The methodology employed is a quantitative, co-relational, interrogative, cross-sectional, and field survey. The unit of analysis is the organization; and One Thousand, Five Hundred and Sixteen (1,516) companies in Nigeria listed in a business directory, "Profile of Business Opportunities in Nigeria" by the Aba and Port Harcourt of Chambers of Commerce (2005), constituted an accessible population. Using the Sampling Fraction Method of determining a sample size (Baridam, 1990), 75 of these companies were selected through a stratified systematic probability sampling technique across three sectors: oil, manufacturing and service sectors. Data from both primary and secondary sources were used; the primary data were those of the nominal and ordinal scales, and were generated through a questionnaire employing Likert scales and distributed to the sampled organizations. The questionnaire items for Competence Planning, Product Offering, and Resource Utilization had Cronbach's alpha of approximately 0.9 for reliability and with factor loadings beyond 0.3 on the first (cluster) factor for validity. The data generated, from the 70 copies of the questionnaire returned (see the appendix), were used to test the hypotheses using the rank correlation statistics of Spearman's rho (p), Kendall's tau (*T*) and Pearson's Product Moment Correlation Co-efficient (r) using SPSS.

RESULTS

To test the hypotheses, data on items in the questionnaire that represented the variables involved in each of them were employed. For instance, for H_{A1}, the two "item-variables" were Cm (complan1) and Ol (prod2). The scores of all the respondents on one a\were correlated with their scores on the other one in a rank order. Applying the three statistical tools, the SPSS produced the test results contained in Table 1. The tabulated results show that only three of the ten originally stated CP hypotheses have, at least, one significant correlation co-efficient. This means that the rest seven have coefficients that were not significant both at 0.01 and 0.05 levels.

Table 1: Results of Test of CP-CPP Hypotheses

Predictor Variable	Test Statistics Statistics	Criterion Variable							Accept
		P	**Pl**	**Ol**	**Pq**	**Tm**	**Ctm**	**Wm**	
Cm	*R*	0.26*	-0.14	0.01	-0.06	0.03	0.13	0.03	H_{A4} H_{A7} H_{A9} UR_1 UR_{10} UR_{11}
	Rho	0.27*	-0.05	-0.07	-0.09	0.05	0.10	0.01	
	T	0.25*	-0.04	-0.07	-0.08	0.05	0.09	0.04	
	Hypothesis	**UR_1**	UR_2	H_{A1}	H_{A2}	UR_3	UR_4	UR_5	
Sga	*R*	0.05	0.06	0.34**	0.06	0.00	0.29*	0.15	
	Rho	0.02	0.06	0.31**	0.00	0.00	0.23	0.14	
	T	0.02	0.05	0.28	0.00	0.00	0.22	0.13	
	Hypothesis	UR_6	H_{A3}	**H_{A4}**	H_{A5}	H_{A6}	**H_{A7}**	H_{A8}	
Pdp	*R*	0.13	-0.05	0.34**	0.03	0.13	0.37*	0.29*	
	Rho	0.12	0.06	0.03	-0.05	0.10	0.23	0.23	
	T	0.11	0.06	0.19	-0.05	0.09	0.22	0.21	
	Hypothesis	UR_7	UR_8	**H_{A9}**	H_{A10}	UR_9	**UR_{10}**	**UR_{11}**	

Source: SPSS Output

Table 2: Keys

Cm = Competence mapping Sga = SKA gap analysis Pdp = Personal development plan P = Product	Pq = Product quality Tm = Time minimization Ctm = Cost minimization Wm = Waste minimization	Correlation is significant at the 0.05 level in a 2-tailed test. **UR**= Un-hypothesized relationships
Pl = Product line Ol = Output levels	Correlation is significant at the 0.01 level in a 2-tailed test	

Interestingly, however, the researcher found three more CP-CPP specific relationships that were not stated as hypotheses earlier. So as seven of the stated hypotheses were rejected and three accepted, the researcher also took cognizance of three of the un-hypothesized relationships with coefficients that were significant. These decisions are shown in the last column of Table 1. Consequently, there were a total of three accepted CP-CPP specific research hypotheses and three associations that were serendipitous, with low to moderately high strength. These, in summary, were:

Table 3

H_{A4}:	SKA gap analysis is significantly associated with output levels.
H_{A7}:	SKA gap analysis is significantly associated with cost minimization.
H_{A9}:	Personal development plan is significantly associated with output levels.
UR_1:	Competence mapping is significantly associated with the product offering of an organization.
UR_{10}:	Personal development plan is significantly associated with cost minimization in an organization.
UR_{11}:	Personal development plan is significantly associated with waste minimization in an organization.

For the hypothesis that stated that competence mapping (Cm) was associated with output levels-Ol (H_{A1}), the coefficients of co-relation were statistically insignificant at 0.05 levels. It was rejected. For the hypothesis that stated that competence mapping (Cm) was associated with product quality – Pq (H_{A2}), insignificant co-relation coefficients at 0.05

levels were found. It was rejected. It was postulated that skill-knowledge-ability gap analysis (Sga) was associated with product lines-Pl (H_{A3}). The correlation of the rank data on skill-knowledge-ability gap analysis (Sga) and product lines (Pl) indicated coefficients that were insignificant at 0.05 levels. It was rejected. The first of the ten hypotheses found acceptable was hypotheses H_{A4}. It stated that skill-knowledge-ability gap analysis (Sga) was associated with output level – Ol. It has correlation coefficients that were positive, relatively strong and significant at 0.01 level. It was accepted. For the hypothesis which stated that skill-knowledge-ability gap analysis (Sga) was associated with Product quality – Pq (H_{A5}), no coefficient was found that was statistically significant at 0.05 levels. It was, therefore, rejected. Similarly, H_{A6} which stated that skill-knowledge-ability gap analysis (Sga) was associated with Time minimization (Tm) was rejected. This was because was no co-efficient of correlation that was statistically significant at 0.05 level.

The second specific hypothesis on the relationship between Competence Planning (CP) and Corporate Productivity Performance (CPP) that was accepted was H_{A7}. It stated that there was an association between skill-knowledge-ability gap analysis (Sga) and Cost minimization (Ctm). It has a co-efficient that was positive, relatively strong and significant at 0.05. Thus, it was accepted. Same, however, could not be said of hypothesis H_{A8}. Though it stated that there was an association between Sga and Waste minimization (Wm), its coefficients were insignificant. It was rejected. Similarly, hypotheses H_{A9} and H_{A10} were also rejected. H_{A9} stated that personal development plan (Pdp) was associated with output levels (Ol). H_{A10} stated that personal development plan (Pdp) was associated with Product quality (Pq). When the data generated on the variables involved (Pdp and Ol; Pdp and Pq), no correlation co-efficient was found to be statistically significant even at 0.05 level. Consequently, both of them were rejected.

There were, however, three CP–CPP specific relationships that were not anticipated and so were not formulated into hypotheses. These were the relationships involving: (i) Competence Mapping and the Product (UR_1), (ii) Personal Development Plan (Pdp) and Cost Minimization-Ctm (UR_{10}), and (iii) Personal Development Plan (Pdp) and Waste Minimization-Wm (UR_{11}). All of these have correlation coefficients that were positive, relatively strong and statistically significant. The foregoing interpretations of our test results could be summed up thus: (a) Skill-Knowledge-Abilities (SKA) gap analysis is positively, strongly and significantly associated with output levels and cost minimization; but not with product lines, product quality, time and waste minimization. (b) Personal development plans by organizational members are positively, strongly and significantly associated with an organization's output levels, cost minimization and waste minimization; but not with product lines and product quality. (c) Competence mapping is positively, strongly and significantly associated with the product of an organization; but not with output level and product quality.

DISCUSSION OF FINDINGS

With the first research question, this study sought to determine how competence planning affects corporate productivity performance through competence mapping. Our finding is that competence mapping affects corporate productivity performance through its bearing on the product an organization offers. The findings have revealed that competence mapping affects the product an organization could produce. One of the accepted hypotheses indicated a significant relationship between these two. It is logical to reason that by the identification, cataloguing and matching of competences, an organization can add to, modernize or even prune its existing product lines, increase its output and improve quality generally (Kotler, 1999). The literature review also revealed that competence planning through competence mapping involves ensuring a high ability-job fit. Robbins (1996) sees this "high ability-job fit" consequent upon competence mapping as having an effect on performance. This is in line with our finding that competence planning

affects productivity performance through competence mapping.

Again in the course of the literature review, it was established that SKA gap analysis enables both workers and management identify the nature, sources and effects of SKA gaps. This is important given the impact of the SKAs on performance as has been observed by scholars (Lock, 1998; Rue and Byars, 1995; Stoner *et al*, 1995). The views of these scholars support the relationships found between SKA gap analysis and performance which were reported in under the results. For example, SKA gap analysis affects output level and cost minimization; as the more systematic the analysis, the higher the output level, and the greater the extent of cost minimization. In other words, competence planning affects corporate productivity performance through SKA gap analysis.

From one of the organizations the researcher visited in the course of the field work, a material obtained considered personal development plan as an aspect of competence planning; and that it involved updates by a worker capable of addressing gaps and areas "to work on future roles" that could affect what the worker could produce (Organization A, 2003). The London Management Centre (2000) credits personal development plans with the ability to link competence to standards and the needs of a business to those of an individual worker. What these attributes of a personal development plan suggest is that it enhances the performance of the individual worker; and consequently affects the performance of the organization. George and Jones (1996) also assert this fact. According to them, "the effectiveness of an organization as a whole depends on the performance level of all individual workers". This offers another explanation of the effects of personal development plans on performance as evident in the study results. The results showed that personal development plans affect output levels, cost and waste minimization. It leads to higher output levels and higher extent of cost and waste minimization. In relation to the study's finding here, this means that by affecting the performance of the worker, personal development plan affects corporate productivity performance. Again, this provides another instance of the effects of competence planning on corporate productivity performance. We can, therefore, conclude that competence planning affects corporate productivity performance.

CONCLUSIONS

There were three important findings of the study. First, the Competence mapping task in workers' competence planning affects the product an organization could offer. Second, the SKA gap analysis task in competence planning results in cost and waste minimization for an organization. Third, Personal development plans by workers as a part of competence planning affect output levels, cost minimization and waste minimization.

Based on the findings of the study, it is important that organizations pay greater attention to the planning of the competences of their workers beyond what is done in traditional human resources planning. Specifically, they need to properly identify and catalogue the competences of their workers and match the resultant competence profiles with jobs or tasks assigned to their workers either individually or in groups. This is the thrust of the competence mapping dimension of competence planning that has been found to affect the product an organization could offer.

Given the concerns of organizations over inefficiencies in the use of their resources resulting in high costs of production and wastages, the relationships found between competence planning and resource utilization, in terms of cost and waste minimizations, constitute a source of relief. Through SKA gap analysis and Personal development plans of workers' competences, an organization is assured of cost and waste minimizations. Furthermore, Personal development plans have manifest implications for output levels as revealed by this study. Consequently, it is also recommended that

organizations religiously undertake SKA gap analysis and at the same time encourage their workers to have Personal development plans as major components of their workers competence planning.

REFERENCES

1. Aba and Port Harcourt Chamber of Commerce (2004/2005 Edition). Business directory: Profile of business opportunities in Nigeria, 2(1), 7-83. Port Harcourt: Media Resource Services.

2. Barad, M. (1998). Total quality management. In Poole, M. & Warner, M. (Eds), The IEBM handbook of human resource management (pp. 292-310). London: International Thomson Business Press.

3. Baridam, D. M. (1993). Research methods in administrative Sciences. Port Harcourt: Belk Publishers.

4. Bateman, T. S. & Snell, A. S. (1999). Management: Building competitive advantage. Boston: Irwin McGraw—Hill.

5. Berio, G. & Harzallah, M. (2005). Knowledge management for competence Management. Journal of Knowledge Management (J. UKM), 0(1), 2-3, Retrieved from file://A:\berio.htm.

6. Business: The ultimate resources. (2002). London: Bloomsbury Publishing Plc.

7. George, J. M. & Jones, G. R. (1996). Understanding organizational behavior. Reading, Massachusetts: Addison-Wesley Publishing Company.

8. Geus, A. de (2002). The living company: Habits for survival in a turbulent business environment. Business: The ultimate resource. London: Bloomsbury Publishing.

9. Kotler, P. (1999). Marketing management. New Delhi: Prentice-Hall of India.

10. Kreitner, R. & Kinicki, A. (2001). Organizational behavior. Boston: Irwin McGraw-Hill.

11. London Management Centre (2000). Management and development training programmes and diploma in management.

12. Marrelli, A. F., Tondora, J., & Hoge, M. A. (2005). Strategies for developing competency models. Administrative and policy in mental Health, 32(5/6), 533-560. Retrieved from www.spingerlink.com.

13. Munene, J., Bbosa, R. & Eboyu, F. (2000). Operant competence management framework for enhancing competence management & development in organizations in Africa. Executive development, 8(7), 6- 25.

14. North, K. & Reinhardt, K. (2003). Transparency and transfer of individual competencies- A concept of integrative competence management. Proceedings of I-KNOW'03, 194-201.

15. Organization A (2003). Competence development tool. A policy document of an organization in the study, Port Harcourt.

16. Robbins, S. P. (1996). Organizational behavior: concepts, controversies, applications, (7ed). New Delhi: Prentice-Hall of India.

17. Rue, L. W. & Byars, L. L. (1995). Management Skills and Application. Chicago: Irwin.

18. Stoner, J. F., Freeman, R. E., & Gilbert, D. R. (1996). Management. N. J., Englewood Cliffs: Prentice-Hall, Inc.

19. Wild, R. (1995). Essentials of production and operations management: Text and cases. London: Cassell.

20. Wright, P. M. & Noe, R. A. (1996). Management of organizations. Boston: Irwin McGraw-Hill.

21. Zeb-Obipi, I. (2015). Corporate Productivity Performance: A Harmonist Framework. International Journal of Business and General Management, 4(1), 19-28.

APPENDICES

Data Distributions on the Variables Per Sector

Table 4: CP and CPP Scores in the Oil Industry

Items	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
CP1	4	4	3	3	3	5	4	3	4	4	5	3	4	4	4	4	5	3	4	4	3	4	3	4
CP2	3	3	4	3	3	4	3	4	4	5	5	4	3	4	3	5	4	4	3	3	4	3	4	4
CP3	4	4	2	4	3	3	3	4	4	5	3	3	4	4	4	4	4	3	4	3	3	4	3	4
PO1	0	0	0	3	0	3	3	0	3	3	4	0	4	4	0	3	0	2	0	0	0	0	0	4
PO2	3	3	4	4	4	4	4	4	4	4	4	3	5	4	3	4	4	4	3	3	4	3	3	5
PO3	3	5	5	5	5	5	5	4	4	5	5	4	5	4	4	5	3	5	5	4	5	0	5	4
RU1	4	3	3	3	3	3	3	3	4	4	4	3	3	3	3	3	4	3	3	3	3	3	4	5
RU2	3	4	3	4	0	3	3	3	4	4	4	4	4	3	4	3	4	3	4	4	4	3	4	4
RU3	4	4	4	3	3	3	3	3	4	4	4	4	3	4	3	3	3	3	3	3	3	5	3	4

Source: Responses to the questionnaire processed through SPSS Data Editor

Table 5: CP and CPP in the Manufacturing Industry

Items	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
CP1	4	4	3	2	4	5	5	4	3	3	4	4	4	4	4	4	5	3	4	2	2	2	3
CP2	3	3	4	4	3	3	4	5	4	3	3	3	2	3	3	3	4	3	2	2	4	4
CP3	4	4	3	2	4	4	3	3	3	3	3	4	3	4	4	4	4	4	1	1	4	0
PO1	3	3	4	3	3	2	4	0	0	3	0	0	3	3	0	0	3	3	4	4	5	0
PO2	4	4	5	4	4	3	3	4	4	4	3	4	4	4	4	4	4	4	2	2	5	4
PO3	4	5	4	5	5	4	4	4	4	5	4	5	5	4	5	5	5	4	4	3	5	5
RU1	3	3	4	3	3	4	4	3	3	3	4	3	3	3	4	4	3	3	3	1	5	4
RU2	4	4	0	4	4	3	3	3	4	3	3	4	4	3	3	3	3	3	3	3	4	3
RU3	3	3	3	4	4	3	3	3	4	3	3	3	3	3	4	4	3	3	3	2	4	3

Source: Responses to the questionnaire processed through SPSS Data Editor

Table 6: Cp and Cpp in the Service Industry

Items	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
CP1	4	4	3	4	4	4	3	3	3	3	5	5	3	4	4	4	4	3	3	4	3	3	3	3
CP2	3	2	4	3	3	3	4	3	4	4	3	3	4	4	4	4	3	4	4	3	4	4	4	3
CP3	4	3	3	3	4	4	4	4	3	3	3	2	3	4	3	4	4	3	3	3	3	2	0	4
PO1	3	2	2	0	0	0	3	4	3	2	3	0	3	4	3	3	3	0	3	0	3	0	3	3
PO2	4	4	4	4	4	3	5	5	4	4	4	4	5	4	5	4	4	5	3	3	4	3	4
PO3	5	5	0	4	3	4	4	5	4	5	5	5	5	4	4	5	5	5	4	5	0	5	5	5
RU1	4	3	3	3	4	3	3	3	4	3	4	3	3	3	3	4	4	3	4	3	3	3	3	4
RU2	3	4	3	4	3	3	4	3	3	3	4	3	4	3	4	3	3	4	3	4	3	4	4	3
RU3	3	4	4	4	4	4	3	4	4	3	3	3	4	4	3	4	4	4	4	3	3	3	3	4

Source: Responses to the questionnaire processed through SPSS Data Editor

Table 7: Keys

A-X = Labels for sample elements (24 Oil, 22 Manufacturing, & 24 Service companies)
CP1-CP3 = Competence Planning Measures (Competence Mapping, SKA Gap Analysis, & Pers. Dev. Plan)
PO1-PO3 = Product Offering Measures (Product Lines, Output Level & Product Quality)
RU1-RU3 =Resource Utilization Measures (Time, Cost & Waste Minization)